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Short Report

Acute Subarachnoid H

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ABSTRACT

Introduction: Liquid sclerotherapy is a commonly performed procedure for treatment of varicose veins. Neurological complications have been reported, however they are rare. Our case report highlights the first case of subarachnoid haemorrhage occurring post sclerotherapy.
Report: A previously healthy 63-year old lady presented with sudden onset headache and vomiting immediately after injection of liquid sclerotherapy for lower limb varicose veins. Non-contrast CT brain demonstrated acute subarachnoid haemorrhage. The patient was treated conservatively and made a full recovery 48 h later.
Discussion: Subarachnoid haemorrhage occurring post sclerotherapy is a serious complication that is associated with this procedure.

Case Report

A 63-year old lady presented to the ED with a short history of sudden onset severe headache, vomiting and photophobia.

Several hours earlier, she underwent liquid sclerotherapy for bilateral lower limb varicose veins. During the procedure, 17 ml of 0.5% liquid polidocanol (85 mg) was injected into telangiectasia and reticular veins. This volume is within the maximum recommended dosage of 2 mg/kg as our patient weighed 68 kg. One month previously, she had undergone bilateral long saphenous endovenous ablation procedure using VNUS (Covidien). This was followed by one session of liquid sclerotherapy using 17 ml of 0.5% liquid polidocanol which was uneventful. Her past medical and surgical history includes hypothyroidism, hysterectomy and a caesarean section. She was on aspirin and thyroxine.

During the procedure, the patient developed sudden onset frontal headache. Her vital signs and neurological observations remained normal during 2 h of monitoring. Her headache improved and she was given 1 g of paracetamol orally and discharged home. A few hours later, her headache recurred, she developed nuchal pain and vomited five times. She returned to the ED and was admitted. An urgent neurosurgical opinion was sought and non-contrast computed tomography (CT) of the brain was performed. This revealed evidence of subarachnoid haemorrhage (SAH) in the supracellar cistern extending into the peri-sylvian area (Fig. 1). Subsequent four vessel cerebral angiography and magnetic resonance angiography (MRI) of the brain did not reveal any intracranial aneurysm or any other intracranial vascular abnormalities. The patient was treated conservatively with careful maintenance of normothermia, normovolaemia and normal oxygenation. After 48 h of neuro-observation the patient was discharged home. Her aspirin was held for six weeks.

On a follow up visit the patient was doing well and had no complications from the subarachnoid haemorrhage.

Discussion

Serious neurological complications occurring following foam sclerotherapy have raised concerns regarding the safety of this procedure. Four strokes have been reported to date with two of them occurring directly after foam sclerotherapy.[1–4] SAH post sclerotherapy, however, has not been previously described. And no strokes have previously been reported after liquid sclerotherapy, as opposed to foam sclerotherapy.

SAH is an uncommon but frequently devastating condition. There is a huge range in the age-adjusted annual incidence of SAH between different countries ranging from 2.9 cases per 100,000 to 22.5 cases per 100,000.[5] The incidence of SAH increases with age and is more common in women. Multivariate studies have found that hypertension, smoking, and heavy alcohol use to be independent risk factors for SAH.[6,7] SAH comprises between 1 and 7% of all strokes and is a true medical emergency with 10–15% of patients

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Figure 1. Non-contrast CT brain demonstrates subarachnoid haemorrhage in the supracellar cistern extending into the left peri-sylvian area.

dying before they reach hospital. Intracranial aneurysms account for 80% of spontaneous SAH (as opposed to *traumatic* SAH), 15% will have no cause found and the remaining 5% will be caused by various non-aneurysmal conditions such as arteriovenous malformations, coagulopathies, anticoagulants, intracranial tumours, cocaine abuse and pituitary apoplexy.

Although the exact cause of SAH in this case is not certain, stress and hypertension during sclerotherapy could potentially have contributed. That being said, the patient's blood pressure recordings were normal immediately on cessation of therapy and for 2 h after the procedure.

Our case report brings to light an association between a potentially fatal condition; subarachnoid haemorrhage and liquid polidocanol sclerotherapy, which is a widely used method for varicose vein treatment. The occurrence of SAH during sclerotherapy suggests the possibility of SAH not being causally unrelated to the sclerotherapy session.

Conflict of Interest/Funding

None.

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